Technics
AV control stereo receiver
SA-GX670
SA-GX470/SA-GX370

Operating Instructions

The photographs show SA-GX670.

Note:
The “EB” indication shown on the packing case indicates United Kingdom.

Before connecting, operating or adjusting this product, please read these instructions completely.
Dear Customer

Thank you for purchasing this Technics product. For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to models SA-GX670, SA-GX470 and SA-GX370. These operating instructions, however, are intended primarily for model SA-GX670.

Caution for AC mains lead
(United Kingdom only)
(“EB” area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

CAUTION:
The AC voltage differs according to the area. Be sure to set the proper voltage in your area before use.
(For details, please refer to the page 8.)

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

Before use
Remove the connector cover as follows.

How to replace the fuse
1. Remove the fuse cover with a screwdriver.

2. Replace the fuse and attach the fuse cover.

(For Australia and N.Z.)

This tuner/receiver is capable of receiving the new AM stereo broadcasts from the AM band radio stations. However, like many tuners and receivers currently available on the market it will reproduce this AM stereo signal only in AM mono, which, in effect, is of no lesser quality than your existing AM mono tuner/receiver.
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Suggestions for safety

Placement
Avoid placing the unit in areas of:
- direct sunlight
- high temperature
- high humidity
- excessive vibration
- uneven surfaces (Place the unit on a flat level surface.)
Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit’s service life.

Ventilation
- Place the unit in a well ventilated position at least 10 cms away from wall surfaces etc.
- Ensure that curtains and similar materials do not obstruct the ventilation holes.

Stacking
Never place heavy items on top of the unit or the power cord.

Voltage
- It is very dangerous to use an AC power source of high voltage such as for an air conditioner.
  A fire might be caused by such a connection.
- A DC power source can not be used.
  Be sure to check the power source carefully, especially on a ship or other place where DC is used.

Power cord protection
- Avoid cuts, scratches or poor connection of the AC mains cord, as this may result in fire or electric shock hazard.
  Excessive bending, pulling or slicing of the cord should also be avoided.
- Do not pull on the cord when you are disconnecting the power, as this could cause an electric shock. Grasp the plug firmly when you disconnect the power supply.
- Never touch the plug with wet hands or a serious electric shock could result.

Foreign materials
- Ensure that no foreign objects, such as needles, coins, screwdrivers etc., accidentally fall into the unit or through the ventilation holes.
Otherwise, a serious electric shock or malfunction could occur.
- Be extremely careful about spilling water or liquid onto the unit, as a fire or electric shock could occur.
  (Disconnect the power plug and contact your dealer immediately if this occurs.)
- Avoid spraying insecticides onto the unit as they contain flammable gases which can be ignited.
- Insecticides, alcohol, paint thinner and similar chemicals should never be used to clean the unit as they can cause flaking or cloudiness to the cabinet finish.

Maintenance
Clean the cabinet, panel and controls with a soft cloth lightly moistened with mild detergent solution.

Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

Service
- Never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem.
  A serious electric shock could result if you ignore this precautionary measure.
- If a problem occurs during operation (the sound is interrupted, indicators fail to illuminate, smoke is detected, etc) contact your dealer or Authorized Service Center immediately.
- Disconnect the power supply if the unit will not be used for a long time. Otherwise the operation life could be shortened.

CAUTION
Do not place a tape deck or CD player on top of this unit.
Heat radiated from the top of this unit may cause damage to the tape or CD software.
Please check and identify the supplied accessories:

- **AC power supply cord** ........................................ 1 pc.
  
  (For United Kingdom) (VJA0733)  
  (For Australia and N.Z.) (RJA0036-K)  
  (For others) (RJA0019-2K)

- **AM loop antenna set (RSA0010)**  
  - AM loop antenna ........................................... 1 pc.  
  - AM antenna holder .......................................... 1 pc.  
  - Screw ..................................................... 1 pc.

- **FM indoor antenna (RSA0007)** ................. 1 pc.

- **Batteries (UM-4, "AAA", R03)** ...................... 2 pcs.

- **Remote control transmitter** ......................... 1 pc.
  
  (For SA-GX670/SA-GX470/SA-GX370) (For areas except United Kingdom and Europe)  
  (RAK-SA114XH)  
  (RAK-SA704XH)  
  (For SA-GX670/SA-GX470/SA-GX370) (For United Kingdom)  
  (RAK-SA163XH)  

  For details on remote control transmitter operation, refer to "How to use the remote control transmitter" in the separate booklet.

- **Attachment plug (SJP0009)** ............................ 1 pc.  
  (United Kingdom only)

- **Power plug adaptor (SJP5213-2)** ..................... 1 pc.  
  (Not supplied for United Kingdom, Europe, Australia and N.Z.)

- **Antenna plug (RFE0014)** ............................... 1 pc.  
  (Not supplied for United Kingdom and Europe)
Front panel controls

For SA-GX670

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<th>No.</th>
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<th>Ref. page</th>
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</thead>
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<td>1</td>
<td>Power &quot;STANDBY ON&quot; switch (POWER, STANDBY ON)</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Tuning control (TUNING)</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>Tuning mode select button (TUNING MODE)</td>
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<tr>
<td>4</td>
<td>Numeric buttons (1-0)</td>
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<tr>
<td>5</td>
<td>Remote control signal receptor (SENSOR)</td>
<td>–</td>
</tr>
<tr>
<td>6</td>
<td>&quot;STANDBY&quot; indicator</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>DOLBY PRO LOGIC SURROUND ON/OFF button (SURROUND)</td>
<td>21,22,23</td>
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<tr>
<td>8</td>
<td>DOLBY PRO LOGIC 3 STEREO ON/OFF button (3 STEREO)</td>
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<tr>
<td>9</td>
<td>Test signal ON/OFF button (TEST)</td>
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</tr>
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<td>10</td>
<td>Center level adjust button (CENTER LEVEL)</td>
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<tr>
<td>11</td>
<td>Display</td>
<td>–</td>
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<tr>
<td>12</td>
<td>Rear level adjust button (REAR LEVEL)</td>
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</tr>
<tr>
<td>13</td>
<td>Center mode select button (CENTER MODE)</td>
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<tr>
<td>14</td>
<td>Memory button (MEMORY)</td>
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</tr>
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<td>15</td>
<td>Help/reset button (-HELP - RESET)</td>
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<tr>
<td>16</td>
<td>Volume control (VOLUME)</td>
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<td>17</td>
<td>Headphone jack (PHONES)</td>
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</tr>
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<td>18</td>
<td>Direct tuning button (DIRECT TUNING)</td>
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</tr>
<tr>
<td>19</td>
<td>Speaker select buttons (SPEAKERS)</td>
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<td>20</td>
<td>Band select button (BAND)</td>
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<tr>
<td>21</td>
<td>FM mode select button (FM MODE)</td>
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<tr>
<td>22</td>
<td>Input select buttons</td>
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</tr>
<tr>
<td>23</td>
<td>Tape/DCC monitor button (TAPE/DCC MONITOR)</td>
<td>14,24</td>
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<tr>
<td>24</td>
<td>Delay time adjust button (DELAY TIME)</td>
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<tr>
<td>25</td>
<td>Muting/loudness button (-MUTING - LOUDNESS)</td>
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<tr>
<td>26</td>
<td>Balance control (BALANCE)</td>
<td>15</td>
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<td>27</td>
<td>Bass control (BASS)</td>
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</tr>
<tr>
<td>28</td>
<td>Treble control (TREBLE)</td>
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</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Ref. page</td>
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<td>“STANDBY” indicator</td>
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<td>Tape/DCC monitor button (TAPE/DCC [MONITOR])</td>
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<td>23</td>
<td>Muting button (MUTING)</td>
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<td>15</td>
</tr>
<tr>
<td>25</td>
<td>Volume control (VOLUME)</td>
<td>14</td>
</tr>
</tbody>
</table>
Connecting audio equipment

Stereo connection cable (not included)
White (L) - Red (R)

CD player (or CD changer) (not included)

Tape deck or digital compact cassette deck (DCC) (not included)

Only for turntable with ground terminal

Antenna terminals
See pages 10 - 11.

Speaker terminals

Turntable (not included)

A “REMOTE CONTROL OUT” terminal
Connect the connection cable for the remote control to a Technics tape deck and/or CD player (or CD changer) which has the appropriate remote control terminal as shown below. If a tape deck is not being used, the CD player (or CD changer) can be connected directly (dotted line).

To set the power voltage
(For areas except United Kingdom, Europe, Australia and N.Z.)
Set the voltage selector to the voltage setting for the area in which the unit will be used.

Note
Note that this unit will be seriously damaged if this setting is not made correctly.

Voltage selector

For a CD player (or CD changer) with a remote control sensor the above connection is not necessary.
Connecting video equipment

Stereo connection cable (not included)
White (L) - Red (R)

Second VCR (for playback only)
(not included)

Monitor TV
(not included)

Video connection cables
(not included)

Cooling fan
The cooling fan operates at high power output levels only.

VCR
(not included)

Audio output
Video output

To connect a video deck with 21 pin scart terminal
VCR (not included)

This unit

21 pin scart cable (not included)

AC power supply cord
(included)

Connect this cord after all other cables and cords are connected.

(For areas except Australia and N.Z.)
Even when the connector is perfectly inserted, the front part of the connector jut out as shown in the drawing. However there is no problem using the unit.

(United Kingdom only)
BE SURE TO READ THE CAUTION FOR THE AC POWER SUPPLY CORD ON PAGE 2 BEFORE CONNECTION.
(For areas except United Kingdom, Europe, Australia and N.Z.)
If the power plug will not fit your socket, use the power plug adaptor (included).
Antenna connections

**FM indoor antenna (included)**

This antenna is normally sufficient for reception of FM broadcasts.

Attach to a wall (using a tape) facing in the direction of best reception.

For best reception sound quality:
An FM outdoor antenna is recommended.
Disconnect the antenna if an FM outdoor antenna is installed.

**FM outdoor antenna (not included)**

The outdoor antenna should be used when using the main unit in mountainous areas or in spaces enclosed by reinforced concrete where the FM indoor antenna (included) does not provide satisfactory reception.

*Note*
An outdoor antenna should be installed by a qualified technician only.

**For United Kingdom and Europe**

FM outdoor antenna
(not included)

75-ohms coaxial cable
(not included)

United Kingdom only
Attachment plug
(included)

**For areas except United Kingdom and Europe**

FM outdoor antenna
(not included)

75-ohms coaxial cable
(not included)

300-ohms feeder wire
(not included)

Antenna plug
(included)

See page 11 for using the antenna plug (included).
**How to use the antenna plug (included)**

(For areas except United Kingdom and Europe)

Two types of wire are most commonly used for connection from the antenna: 300-ohms parallel feeder wire or 75-ohms coaxial cable. For best resistance to outside interference, the use of 75-ohms coaxial cable is suggested.

---

**To connect a 75-ohms coaxial cable**

1. Remove a piece of the outer vinyl insulator.

![Image](20\text{mm} (7/8\text{"}) \rightarrow 10\text{mm} (3/8\text{"}))

2. Remove the cover while pulling the tabs.

*Note*

If the tabs are pulled too hard, the casing may be damaged.

3. Remove the lead wire and clamp it with the plastic bar.

![Image](Lead wire \rightarrow Plastic bar)

4. Install the coaxial cable.

Clamp the cable conductor, and wind it on so that it doesn’t contact anything else.

![Image](Press down with pliers.

5. Attach the cover.

---

**To connect a 300-ohms feeder wire**

Loosen the screw to connect the feeder wire and tighten it to secure the connection.

---

**AM loop antenna (included)**

This antenna is normally sufficient for reception of MW/LW broadcasts.

![Image](AM loop antenna (included))

Install the AM antenna holder (included) at the rear panel of this unit and then attach the AM loop antenna to the AM antenna holder (facing in the direction of best reception).

![Image](Rear panel of this unit \rightarrow Insert the tab into the hole and then push the holder downward.)

**When mounting the antenna to a column, a wall, or rack**

Mount it vertically.

![Image](AM antenna holder (included) \rightarrow AM antenna holder (included) \rightarrow Screw (included))

**Pay attention to the following points when mounting the antenna.**

- Do not mount it horizontally (doing so will impair reception).
- Do not mount it close to power cords, speaker wires or metal surfaces (doing so will result in noise).
- Do not mount it close to a tape deck. When the tape deck is being used, chirping or beeping sounds may result.
Antenna connections

AM outdoor antenna (not included)

The outdoor antenna should be used when using the main unit in mountainous areas or in spaces enclosed by reinforced concrete where the AM loop antenna (included) does not provide satisfactory reception.

Use 5—12 m of vinyl-covered wire horizontally at the window, or the convenient location.

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

Note
Be sure to connect the AM loop antenna even when an outdoor antenna is used.

Speaker connections

Placement of speakers

As well as enjoying normal stereo reproduction with both the left and right front speakers connected, a center speaker and rear speakers can also be connected to the main unit in order to enjoy playback using the Dolby Pro Logic Systems.

The illustration below shows where to place the speakers when enjoying sound with Dolby Pro Logic systems. The listening position at which the effect is the greatest is a position slightly to the rear of a center position of five-speaker systems. However the position should be adjusted to your personal preference, because the effect varies to some degree depending upon the type of music and the music source.

Front speaker (not included) (Left)  Front speaker (not included) (Right)

Center speaker (not included)

Rear speaker (not included) (Left)  Rear speaker (not included) (Right)
Connection of front speakers

Right speaker (not included)  Left speaker (not included)

Speaker cables (not included)  This unit

Connection of rear speakers

Right speaker (not included)  Left speaker (not included)

Speaker cables (not included)  This unit

Note:
Before sound can be heard, the SURROUND mode (of the Dolby Pro-Logic system) must be on and both rear speakers must be connected.

Speaker impedance

For SA-GX470
(For United Kingdom and Europe)  4 – 16 Ω
(For others)  8 – 16 Ω
For SA-GX670/SA-GX370  4 – 16 Ω

Connection of center speaker

Center speaker (not included)

Note:
Before sound can be heard, the SURROUND mode or 3 STEREO mode (of the Dolby Pro-Logic system) must be on.

Speaker impedance

(For United Kingdom and Europe)  4 – 16 Ω
(For others)  8 – 16 Ω

"B" terminals

For connection to a second pair of speakers.

Speaker impedance

When only the "A" or only the "B" speakers are connected:
(For United Kingdom and Europe)  4 – 16 Ω
(For others)  8 – 16 Ω

When both the "A" and the "B" speakers are connected simultaneously:  8 – 16 Ω

Note:
To prevent damage to circuitry, never short-circuit positive (+) and negative (−) speaker wires.
Before operation, set VOLUME to the "0" position.
When viewing a video, turn on the power supply for the TV and set the TV to video mode.

1. Press POWER to switch on the power.

2. Press A and/or B to select the speaker system(s) to be used.
   A and B refer to the speaker terminals at the rear of the unit.

   **Illuminates**
   If the button is pressed once more, the indicator will switch off and no sound will be heard from the speakers.

3. Press to select the desired source.
   - VCR 1: To watch video tapes (VCR 1)
   - VCR 2: To watch video tapes (VCR 2)
   - TAPE/DCC: To listen to tape or digital compact cassette (DCC)
     The tape monitor indicator will appear.
     (See below.)
   - CD: To listen to compact discs
   - TUNER: To listen to radio broadcasts
   - PHONO: To listen to phono discs

4. Start the desired source.
   (Refer to the appropriate operating instructions for details.)

5. Turn VOLUME to adjust the volume level.

After listening is finished
Be sure to reduce the volume level, and switch the power to the standby condition by pressing POWER.

When tape monitor indicator illuminates or is flashing (approx. 3 seconds)
This indicates that the tape monitor function of this unit is ON.
To listen to sources other than a tape or DCC, be sure to turn off the indicator by pressing TAPE/DCC [MONITOR].
To listen to a desired audio source while watching a video
Select the desired video source and audio source in step 3 on the left.
Be sure to select the video source first.

To adjust the tone quality
- BASS
  Turn BASS to adjust the low-frequency sound.
- TREBLE
  Turn TREBLE to adjust the high-frequency sound.

To mute the sound level
- For SA-GX670
  Press -MUTING momentarily.
- For SA-GX470/SA-GX370
  Press MUTING.
  Press once again to return to the previous volume level. (The muting indicator will turn off.)

To adjust the sound balance
BALANCE
Turn BALANCE to adjust the left/right sound balance.

To emphasize low-frequency sound
SA-GX670 only
- MUTING
  - LOUDNESS
  Press -LOUDNESS until the "LOUDNESS" illuminates.

- LOUDNESS
  Press and hold the button until the "LOUDNESS" turns off to return to the previous condition.

To listen through headphones
Use VOLUME to reduce the volume level, and connect the headphones.
If sound from speakers is not wanted, press SPEAKERS (A) and/or (B) to turn off the speaker select indicators.
Note: Avoid listening for prolonged periods of time to prevent hearing damage.

If sound output stops during use
SA-GX670 only
- HELP
  The help function can be used to show details of the operations you are expected to make on the display in character form.
  For details, see page 26.
Direct access tuning

Specify the frequency using the numeric buttons to directly tune to the desired broadcast station.

For SA-GX670

1. Press TUNER.

2. Press BAND to select “FM”, “MW” or “LW”.

3. Press DIRECT TUNING.

4. Press the appropriate numeric buttons to enter the frequency.
   - While cursor display is flashing (approx. 10 seconds)
   - If the desired FM frequency is 107.90 MHz

When the FM stereo broadcast is received:
This unit will automatically switch to FM stereo reception and the FM stereo indicator will illuminate.

If noise is excessive in the FM stereo mode
Press FM MODE. (The FM stereo indicator will switch off.) The broadcast will be monaural, but noise will be reduced. If the button is pressed once more, stereo mode will be resumed.

To change the MW frequency step
Press and hold BAND for about 3 seconds. (The frequency step changes to 10 kHz per step.) To return to the previous step, press and hold BAND for about 3 seconds again.
**Sequential tuning**  For SA-GX670

If the frequency is not known, use the tuning control for searching.

**Auto tuning**

This automatically searches for broadcast stations which provide strong signal reception.

1. **Press TUNER.**
2. **Press BAND** to select "FM", "MW" or "LW".
3. **Press TUNING MODE** to select "AUTO".
   - The "AUTO" mark points to AUTO.
4. Turn TUNING until the frequency begins to change.
   - Automatically stops when a broadcast station is found.

**Manual tuning**

The frequency will change only by the amount that the tuning control is turned.

1. **Press TUNER.**
2. **Press BAND** to select "FM", "MW" or "LW".
3. **Press TUNING MODE** to select "MANUAL".
   - The "AUTO" mark points to MANUAL.
4. Turn TUNING to tune to the desired broadcast.
   - Turn until the desired broadcast station is obtained.

**To lock a broadcast station being received**

Press TUNING MODE to select "LOCK".

The "AUTO" mark points to LOCK.

During this display, the frequency will not change even if TUNING is turned.

**Note**

Tuning may stop automatically if any jamming is encountered.
**Sequential tuning**

*For SA-GX470/SA-GX370*

If the frequency is not known, use the tuning buttons for searching.

1. Press TUNER.

2. Press BAND to select “FM”, “MW” or “LW”.

3. Press ▼ or ▲ to tune to the desired broadcast.

If either button is pressed and held down until the frequency begins to change, the broadcast stations can be tuned automatically when a broadcast station is found.

*Note*

Tuning may stop automatically if any jamming is encountered.

---

**Preset tuning**

By presetting the desired broadcast stations into the memory channels of this unit, broadcast stations can be selected simply by pressing numeric button(s). (Refer to page 20 for tuning.)

**Before presetting**

*How many broadcast stations can be preset?*

A total of 30 FM, MW and LW stations can be preset.

*How is presetting done?*

The two following methods are available.

- **Automatic memory presetting**
  
  Automatic memory presetting allows this unit to automatically search for broadcast stations and then preset them into memory.

  With this function, searching proceeds from the frequency currently being displayed and continues to highest frequency, and broadcast stations are preset in the order in which they are located.

  In this method, the channel ranges that can be preset into the memory for different bands (FM, MW or LW) are set as follows.

  Channel

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>20/21</th>
<th>26/27</th>
<th>30</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM</td>
<td>MW</td>
<td>LW</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

  For example, after presetting the FM band, if the MW band is preset, the previous settings in the sections in the above illustration which overlap will be erased and the subsequent settings will be preset. Therefore, the FM band stations will be kept for channels 1—20 and the MW band stations will be preset to channels 21—30.

- **Manual memory presetting**
  
  The desired broadcast stations can be preset into the desired channels by the user.

  This can also be used as a method for changing selected broadcast stations that were preset in “Automatic memory presetting”.

  *Note*

  If a new broadcast station is preset into a channel, the setting for the broadcast station which was previously entered in that channel will be automatically erased.
**Automatic memory presetting**

1. Set to the frequency from which you want to start automatic memory presetting. (Follow steps 1 through 4 on page 16.)

2. Press MEMORY until the frequency begins to change. (Automatic memory presetting will start.)

   To stop press MEMORY once again.

**Manual memory presetting**

1. Set to the desired broadcast.
   (Follow steps 1 through 4 on page 16 or 17 or steps 1 through 3 on page 18.)
   You can also set the stereo mode to the monaural position.

2. Press MEMORY momentarily.

   Illuminates
   To cancel the memory function, press MEMORY again.

3. Specify the desired channel to be preset using the numeric button(s) (completes presetting).
   (Example: Channel 12)

   **To continue presetting**
   Repeat steps 1 through 3.

**When a broadcast station is preset**
The memory indicator and the preset channel number will be displayed for approximately 1 second.

---

**When presetting is completed**
The last broadcast station to be preset will be displayed.

**Note**
Correct presetting may not be possible in cases where the broadcast waves are too strong or too weak. In such cases, carry out presetting manually.
Listening to radio broadcasts

Preset tuning (continued)

To listen to preset broadcast stations

1 Specify the preset channel using the numeric button(s).
   Example: Channel 12

   (Within 2 sec.)

To confirm the channel number of the broadcast station being received

Press TUNER.
(The channel number will be displayed for about one second.)

Note
The channel number is not displayed if you change the reception frequency or FM mode setting.

For your reference:

Even if the power is switched to the standby condition or the power cord is disconnected from the household AC outlet, the contents of the memory will continue to be stored for approximately one month.

If frequency presets are accidentally erased

Make the frequency presets once again.
The power cord should remain connected for one hour or more for the memory back-up to be effective.
Enjoying sound with DOLBY PRO LOGIC

By combining front (A or B), center and rear speakers, SURROUND mode which conveys a feeling of presence or 3 STEREO mode which conveys a feeling of orientation can be enjoyed.

SURROUND

By reproducing the feeling of depth and movement of sound, video software or compact discs recorded with Dolby Surround provide the listener with a feeling of presence like that of a movie theater.

To enjoy SURROUND, be sure to connect the rear speakers.

3 STEREO

Music and news programs with clear sound and a good feeling of orientation can be enjoyed.

To enjoy 3 STEREO, be sure to connect the center speaker.

Setting the center mode

For Dolby Pro Logic systems, center mode setting is necessary to play back bass sounds effectively. Set the center mode in accordance with the size of your center speaker.

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In the PHANTOM mode, the sound from the center speaker will be divided between both the left and right front speakers.
Adjusting the output level of each speaker

In order to reproduce the feeling of movement of the sound and clear orientation of sound, it is important to correctly adjust the output levels of each speaker. Adjust to the correct levels while listening to the test signal.

1. Press A or B to select the speaker system to be used.

   ![TEST](image)

   Press TEST to output a test signal.

   Test signal sounds sequentially as follows:
   - For SURROUND mode:
     - Front speaker → Center speaker (left)
     - Rear speakers → Front speaker (left, right)
   - For 3 STEREO mode:
     - Front speaker → Center speaker (left)
     - Front speaker (right)

2. Press SURROUND or 3 STEREO to turn on the desired mode.

   ![TEST](image)

   For SURROUND mode:
   - VCR 1
   - Press once again to turn it off.

3. Press CENTER LEVEL (–) or (+) or REAR LEVEL (–) or (+) to adjust the output level balance.

4. Turn VOLUME to set the volume level normally used for enjoying the source.

5. Press CENTER LEVEL (–) or (+) or REAR LEVEL (–) or (+) to adjust the output level balance.

   ![TEST](image)

   The output levels can be varied within a range of –12 dB to +12 dB according to the output levels from the front speakers.
Adjusting the delay time
SA-GX670 only

When enjoying with SURROUND only, adjust so that the sound from the rear speakers is correctly oriented.

1 Press SURROUND to turn on the SURROUND mode.

2 Press DELAY TIME to set to the suitable time.

Each time the button is pressed, the delay time will increase by 5 ms. To calculate the delay time, refer to the calculation methods below.

Front speaker (L) Center speaker Front speaker (R)

L1

Rear speaker (L) Rear speaker (R)

- If L1 ≤ L2: Set to 15 ms.
- If L2 < L1: Start at 15 ms and increase by 5 ms for every 5 feet of difference between L1 and L2.

Enjoying with SURROUND or 3 STEREO

1 Press SURROUND or 3 STEREO to turn on the desired mode.

For SURROUND mode

For 3 STEREO mode

Press once again to turn it off.

2 Select the desired source.

Start the desired source.

Note
When employing SURROUND, use software which has been recorded with Dolby Surround.
Making a recording

**Tape recording on the tape deck or digital compact cassette deck (DCC)**

Before recording, prepare the tape deck or DCC for recording (recording level adjustment, etc.). See the tape deck’s or DCC’s operating instructions for details.

**VCR (VCR 1) recording from an audio source**

Before recording, prepare the VCR (VCR1) for recording (recording level adjustment, input selector setting, etc.). See the VCR’s operating instructions for details.

---

**1**

Select the audio/video source to be recorded.

---

**2**

Begin recording. Follow your tape deck’s or DCC’s operating instructions.

---

**3**

Begin the audio/video source to be recorded.

---

**1**

Select the audio source to be recorded.

---

**2**

Begin recording on the VCR 1. Follow your VCR’s operating instructions.

---

**3**

Begin the audio source to be recorded.

---

**To check the sound recorded while recording is being made**

With a tape deck with 3 heads, it is possible to check the sound recorded on the tape.

Press TAPE/DCC [MONITOR] on this unit and set the monitor button on the tape deck to "TAPE".

Illuminates

Press TAPE/DCC [MONITOR] once again to turn it off.
**Recording from VCR 2 to VCR 1**

Before recording, prepare the VCR (VCR 1) for recording (recording level adjustment, etc.).
See the VCR's operating instructions for details.

1. Press VCR 2.

2. Begin recording on the VCR 1 and playback the tape on the VCR 2.

   Follow your VCR's operating instructions.

**For your reference:**
If a laser disc player is connected to the "VCR 2" terminals, recording from the laser disc player is possible by following the above procedure.

---

**To record picture from VCR 2 and sound from a different audio source**

Before recording, prepare the VCR (VCR 1) accordingly (recording level adjustment, input selector setting, etc.).
See the VCR's operating instructions for details.

1. Press VCR 2.

2. Select the audio source to be recorded.


   Follow your VCR's operating instructions.

4. Begin the audio source to be recorded and playback the tape on the VCR 2.

**For your reference:**
If a laser disc player is connected to the "VCR 2" terminals, recording a picture from the laser disc player is possible by following the above procedure.
About the HELP function
SA-GX670 only

If you make a mistake in operation or if sound output stops due to some operation which was performed, the HELP function displays characters which can be useful for indicating the method by which this condition can be remedied.

If “ERROR” or scrolling characters (for instance, “TAPE MONITOR ON NOW”) appears on the display during operation, carry out the following operation.

Press -HELP momentarily.
The method for remedying this condition will be displayed.

For your reference:
If the above button is pressed for a longer period until “RESET” appears on the display, the operation settings for the unit will be initialized to the settings made at the time of shipment.
However, any broadcasting stations which have been preset into memory will not be erased at this time.

Technical specifications
(DIN 45 500)

AMPLIFIER SECTION
Power output (at 240 V)
DIN 1 kHz (T.H.D. 1%)
(For United Kingdom and Europe)
[SA-GX670] 2 x 100 W (4 Ω)
[SA-GX470] 2 x 80 W (4 Ω)
[SA-GX370] 2 x 50 W (4 Ω)
(For others)
[SA-GX670] 2 x 110 W (8 Ω)
[SA-GX470] 2 x 100 W (8 Ω)
20 Hz – 20 kHz continuous power output
both channels driven
(For United Kingdom and Europe)
[SA-GX670] 2 x 65 W (8 Ω)
[SA-GX470] 2 x 50 W (8 Ω)
[SA-GX370] 2 x 30 W (8 Ω)
[SA-GX670] 2 x 90 W (8 Ω)
[SA-GX470] 2 x 80 W (8 Ω)
(For others)

Total harmonic distortion
rated power at 20 Hz – 20 kHz
0.05% (8 Ω)
half power at 1 kHz
0.03% (8 Ω)

Power output at the Dolby Pro Logic operation
DIN 1 kHz (T.H.D. 1%)
Front (For United Kingdom and Europe)
[SA-GX670] 2 x 60 W (4 Ω)
[SA-GX470] 2 x 50 W (4 Ω)
[SA-GX370] 2 x 40 W (4 Ω)
[SA-GX670] 2 x 60 W (8 Ω)
[SA-GX470] 2 x 40 W (8 Ω)
(For others)
Center (For United Kingdom and Europe)
[SA-GX670] 60 W (4 Ω)
[SA-GX470] 50 W (4 Ω)
[SA-GX370] 40 W (4 Ω)
[SA-GX670] 60 W (8 Ω)
[SA-GX470] 40 W (8 Ω)
(For others)
Rear (For United Kingdom and Europe)
[SA-GX670] 30 W (4 Ω)
[SA-GX470] 25 W (4 Ω)
[SA-GX370] 20 W (4 Ω)
[SA-GX670] 30 W (8 Ω)
[SA-GX470] 20 W (8 Ω)
(For others)

Intermodulation distortion
rated power at 60 Hz: 7 kHz = 4:1, SMPTE 0.5% (8 Ω)

Power bandwidth
both channels driven, –3 dB
10 Hz – 40 kHz (8 Ω)
Damping factor
40 (8 Ω)

Input sensitivity and impedance
PHONO
3 mV/47 kΩ
CD, VCR 1, VCR 2, TAPE/DCC 200 mV/22 kΩ

S/N at rated power (8 Ω)
PHONO
70 dB (IHF, A: 80 dB)
CD, VCR 1, VCR 2, TAPE/DCC 75 dB (IHF, A: 88 dB)

Frequency response
PHONO
RIAA standard curve
(30 Hz – 15 kHz) ±0.8 dB
CD, VCR 1, VCR 2, TAPE/DCC
10 Hz – 40 kHz, ±3 dB

Tone controls
LOW 50 Hz, ±10 to –10 dB
TREBLE 20 kHz, ±10 to –10 dB

Loudness control (volume at –30 dB) [SA-GX670 only]
50 Hz, ±9 dB

Output voltage
VCR 1 OUT, TAPE/DCC REC (OUT) 200 mV
Channel balance (250 Hz – 6.3 kHz) ±1 dB
Channel separation 55 dB
Headphones output level and impedance 430 mV/330 Ω

Load impedance
A or B (For United Kingdom and Europe) 4 – 16 Ω
(For others) 8 – 16 Ω
A and B 8 – 16 Ω
FM TUNER SECTION
Frequency range: 87.50 – 108.00 MHz
Sensitivity:
- S/N 30 dB: 1.5 μV/75 Ω
- S/N 26 dB: 1.3 μV/75 Ω
- S/N 20 dB: 1.2 μV/75 Ω
IFH usable sensitivity:
- (IFH '58): 1.5 μV/75 Ω
IFH 46 dB stereo quieting sensitivity: 22 μV/75 Ω
Total harmonic distortion:
- MONO: 0.2%
- STEREO: 0.3%
S/N:
- MONO: 60 dB (75 dB, IHF)
- STEREO: 58 dB (71 dB, IHF)
Frequency response: 20 Hz – 15 kHz, +1 dB, –2 dB
Alternate channel selectivity:
- ±400 kHz: 65 dB
- Capture ratio: 1 dB
Image rejection at 98 MHz: 40 dB
IF rejection at 98 MHz: 70 dB
Spurious response rejection at 98 MHz: 70 dB
AM suppression: 50 dB
Stereo separation:
- 1 kHz: 40 dB
Carrier leak:
- 19 kHz: –30 dB (–35 dB, IHF)
- 38 kHz: –50 dB (–55 dB, IHF)
Channel balance (250 Hz – 6.3 kHz):
- ±1.5 dB
Limiting point: 1.2 μV
Bandwidth:
- IF amplifier: 180 kHz
- FM demodulator: 1000 kHz
Antenna terminal(s): 75 Ω (unbalanced)

AM TUNER SECTION
Frequency range:
- MW: 522 – 1611 kHz (9 kHz steps)
- LW: 530 – 1620 kHz (10 kHz steps)
- LW: 144 – 288 kHz
Sensitivity:
- MW: 20 μV, 330 μV/m
- LW: 45 μV
Selectivity:
- MW (at 999 kHz): 55 dB
- LW (at 252 kHz): 55 dB
Image rejection:
- MW (at 999 kHz): 40 dB
- LW (at 252 kHz): 40 dB
IF rejection:
- MW (at 999 kHz): 55 dB
- LW (at 252 kHz): 55 dB

VIDEO SECTION
Output voltage at 1 V input (unbalanced): 1 ±0.1 Vp-p
Maximum input voltage: 1.5 Vp-p
Input/output impedance: 75 Ω (unbalanced)

GENERAL
Power consumption:
- (For United Kingdom and Europe): [SA-GX679] 230 W
- [SA-GX470] 220 W
- [SA-GX370] 220 W
- [SA-GX670] 230 W
- [SA-GX470] 170 W
- [SA-GX670] 250 W
- [SA-GX470] 210 W

Power supply:
- (For United Kingdom, Europe, Australia and N.Z.):
  - AC 50/60 Hz, 230 – 240 V
- (For others):
  - AC 50/60 Hz, 110 – 127 V, 220 – 240 V
Dimensions (W x H x D):
- [SA-GX679] 430 x 158 x 352 mm
- [SA-GX470 / SA-GX370] 430 x 136 x 352 mm
Weight:
- [SA-GX679 / SA-GX370]: 9.6 kg
- [SA-GX470]: 8.6 kg

Notes:
1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by the digital spectrum analyzer.

For United Kingdom only
This apparatus was produced to BS 800.
Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of authorized service centers (enclosed with this unit) to locate a convenient service center, or consult your Technics dealer for instructions.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable cause(s)</th>
<th>Suggested remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>While listening to FM broadcasts</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| An unusual hissing noise is heard when listening to the broadcast in stereo, but not heard when listening monaurally. | A slight noise may be heard because the method used for modulation of FM stereo broadcasts is different than that used for monaural broadcasts. | • Try reducing the treble sound by using the treble control.  
• Try changing the location, height and/or direction of the antenna.  
• If an indoor antenna is being used, change to an outdoor antenna.  
• Try using an antenna with more elements. |
| The FM stereo indicator or the quartz lock indicator flickers, without completely illuminating. | Poor location and/or direction of the antenna.  
Transmitting station is too far away. | • Try changing the location, height and/or direction of the antenna.  
• If an indoor antenna is being used, change to an outdoor antenna.  
• Try using an antenna with more elements. |

| **While listening to AM broadcasts** | | |
| An unusual “bleep” sound is heard. | Unit is being used at the same time as the television set.  
Interference from adjacent broadcast signal. | • Turn off the television set, or use this unit farther away from it.  
• Try reducing the treble sound by using the treble control. |
| A low-pitched “hum” sound is heard when the broadcast is tuned. | The AM loop antenna connection wires are too close to the power cord.  
The power supply frequency from the power cord is modulated and heard from the speakers. | • Place the antenna connection wires and the power cord farther apart.  
• Install a special outdoor antenna. |

| **Problems noted at all times** | | |
| No sound is heard. | Both A and B speakers are turned OFF.  
The tape monitor function is ON.  
The muting function is ON.  
Connections are incomplete or incorrect to the speaker systems, etc.  
The incorrect input selector has been pressed. | • Select the input select button for the source to which you wish to listen and press it one or two times. (The display will scroll through the causes of the problem.) Use this display as a guide to remedy the problem.  
• Check to be sure that all connection wires are correctly connected.  
• Check to be sure that the correct selector is pressed. |
| Sound stops during a performance, or no sound is heard when the power is switched ON. (The word “OVERLOAD” appears on the display.) | The protection circuitry has functioned because the positive and negative speaker connection wires are “shorted”, speaker systems with an impedance less than the indicated rated impedance of this unit are used or under severe use, such as loud volume, excessive power and in an excessively hot environment. | • Switch off the power, and after determining and correcting the cause, switch on the power once again.  
• Use a speaker system of the proper impedance rating. |
| The DOLBY PRO LOGIC (SURROUND or 3 STEREO) indicator and speaker select indicators (A, B) are flashing. (The word “ERROR” appears on the display.) | When the Dolby Pro Logic system is ON, both A and B speakers are turned ON.  
When both A and B speakers are being used simultaneously, the Dolby Pro Logic system is turned ON. | • Turn off the Dolby Pro Logic system or one of the speakers.  
• Turn off one of the speakers. |

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